

ABSTRACT

GPS functionality is added to a wireless communication device in an efficient and cost effective manner. Briefly, the present invention has a common mixer constructed to be used for a GPS signal and another signal or a common IF filter constructed to be used for a GPS signal and another signal. In one embodiment, a common mixer and IF filter are used for both PCS and GPS signals. In another embodiment, a band select switch may be used to select either the PCS signal or the GPS signal. Alternatively, a duplexer or diplexer may couple the GPS signal and the PCS signal to the common mixer. In this way, a common mixer is enabled to be used for both GPS and PCS. A dual band local oscillator may be configured to output a local oscillator signal facilitating selection of a GPS IF signal, a PCS IF signal or a cellular CDMA IF signal, using a common IF filter. In another embodiment, both the GPS low noise amplifier (LNA) and the PCS LNA may be switched on and off depending upon whether GPS or PCS reception is selected.